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Serial No. 10/699,655

IN THE CLAIMS:

None of the claims are amended herein. However, for the convenience of the Examiner, all the pending claims are reproduced below.

1-16. (CANCELLED)

17. (PREVIOUSLY PRESENTED) An optical amplifier comprising:

an amplification medium for amplifying wavelength-division-multiplexed (WDM) light passed through an upstream transmission line using an excitation light;

a measurement part for measuring both of optical power of said WDM light inputted to said amplification medium and optical power of said WDM light outputted from said amplification medium;

a variable gain equalizer connected to a downstream transmission line and capable of variably gain equalizing of said WDM light amplified by said amplification medium;

a database for holding loss-wavelength characteristics data according to a plurality of transmission line types and gain-wavelength characteristics data according to a plurality of amplifying medium types with an input optical power and an output optical power as parameters;

an arithmetic part for computing an inverted characteristic of passing-wavelength characteristic of said transmission line and said amplification medium, on the basis of said loss-wavelength characteristic data according to a type of said transmission line held in said database and said gain-wavelength characteristic data according to a type of said amplification medium specified by said parameters, held in said database; and

a setting part for setting a passing-wavelength characteristic of said variable gain equalizer to said inverted passing-wavelength characteristic computed by said arithmetic part.

18. (PREVIOUSLY PRESENTED) The optical amplifier as set forth in claim 17, further comprising:

an acquisition part for acquiring the type of said transmission line used,

wherein said arithmetic part computes the inverted characteristic of passing-wavelength characteristic of said transmission line on the basis of said loss-wavelength characteristic data according to the type of said transmission line acquired by said acquisition part.

19. (PREVIOUSLY PRESENTED) The optical amplifier as set forth in claim 17, wherein: